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IN THE CLAIMS

1.   (original) A method for analyzing defects on a substrate, the method including the
     steps of:
     inspecting the substrate to detect the defects,
     identifying the defects by location,
5   analyzing the defects to detect extended objects, and
     analyzing the extended objects for repetition across the substrate.

2.   (original) The method of claim 1, wherein the step of inspecting the substrate
     comprises an optical inspection.

3.   (original) The method of claim 1, wherein the substrate is a monolithic
     semiconducting substrate having integrated circuitry thereon.

4.   (original) The method of claim 1, wherein the substrate is a reticle.

5.   (original) The method of claim 1, wherein the substrate is a mask.

6.   (original) The method of claim 1, wherein the extended objects include at least
     one of clusters and signatures.

7.   (original) The method of claim 1, wherein the step of analyzing the defects to
     detect extended objects includes specifying a bounding box size.

8.   (original) The method of claim 1, wherein the step of analyzing the extended
     objects for repetition includes specifying a bounding box size.

9.   (original) The method of claim 1, wherein the step of analyzing the extended
     objects for repetition includes specifying a bounding box orientation.

10. (original) The method of claim 1, wherein the step of analyzing the extended
     objects for repetition includes specifying a bounding box overlap.

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11.   (currently amended) A method for analyzing defects on a semiconductor substrate, the method including the steps of:

optically inspecting the substrate to detect the defects,

identifying the defects by location,

5   analyzing the defects to detect extended objects, and

analyzing the extended objects for repetition across the substrate.

12.   (original) The method of claim 11, wherein the extended objects include at least one of clusters and signatures.

13.   (original) The method of claim 11, wherein the step of analyzing the defects to detect extended objects includes specifying a bounding box size.

14.   (original) The method of claim 11, wherein the step of analyzing the extended objects for repetition includes specifying a bounding box size.

15.   (original) The method of claim 11, wherein the step of analyzing the extended objects for repetition includes specifying a bounding box orientation.

16.   (original) The method of claim 11, wherein the step of analyzing the extended objects for repetition includes specifying a bounding box overlap.

17.   (original) An apparatus for analyzing defects on a substrate, the apparatus comprising:

a sensor for inspecting the substrate,

a stage for providing relative movement between the sensor and the substrate, and

5   a controller for;

correlating defect information from the sensor and position information from the stage,

analyzing the correlated defect information and position information to detect extended objects, and

10   analyzing the extended objects for repetition across the substrate.

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18. (original) The apparatus of claim 17 further comprising an input for receiving at least one of a bounding box size, a bounding box orientation, and a bounding box overlap as adjustable parameters for use in detecting and analyzing the extended objects for repetition.

19. (original) The apparatus of claim 17 wherein the substrate is at least one of a semiconductor substrate, a reticle, and a mask.

20. (original) The apparatus of claim 17 wherein the sensor is an optical sensor.